

ABSTRACT

A method of fabricating an oxide-nitride-oxide (ONO) layer in a memory cell to retain charge well in the nitride layer includes the steps of forming a bottom oxide layer on a substrate, depositing a nitride layer and oxidizing a top oxide layer, thereby causing oxygen to be introduced into the nitride layer. Another method includes the steps of forming a bottom oxide layer on a substrate, depositing a nitride layer and oxidizing a portion of a top oxide layer, thereby causing oxygen to be introduced into the nitride layer and depositing a remaining portion of the top oxide layer, thereby assisting in controlling the amount of oxygen introduced into the nitride layer. A further method includes the steps of forming a bottom oxide layer on a substrate, depositing a nitride layer, depositing a portion of a top oxide layer and oxidizing a remaining portion of the top oxide layer, thereby causing oxygen to be introduced into the nitride layer.